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EXPERIENCE IN USING FREEZER LOCKERS FOR PRESERVING FRUITS, VEGETABLES,
AND MEATS IN WASHINGTON STATE

Progress Report, March 1938

by

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The use of freezer lockers in the State of Washington dates back 4 or 5 years when the first one was established in a small town near Pullman. Since that time something more than 200 plants have been built in the State. These contain from 1 to 500 individual lockers, each usually containing from 8 to 12 cubic feet of space.

At first only meat was stored, but when information became available through H. C. Diehl, director of the U. S. Department of Agriculture frozen pack laboratory in Seattle, on methods to preserve fruits and vegetables by freezing, mimeographed material containing information as to methods was prepared and distributed. Soon after that a bulletin was printed 1, and ten or twelve thousand copies have been distributed in the State.

Freezing is gradually becoming an accepted method of food preservation for farm homes in communities where locker plants are available, and there is now at least one such plant in every county of the State. Many counties have 10 or 12 plants.

We have given a class on preservation by freezing at 4-H Club Camp for the past 2 years. The first year both boys and girls attended the class and prepared one can of fruit or vegetables for the locker. Last year only the girls attending the camp received this instruction.

Demonstrations have been given in the counties both by the specialist and by the home-economics agents.

Important points to emphasize are varieties, containers, methods, and freezing and storage temperatures. The varieties that have been found satisfactory are listed in the bulletin 1. The containers recommended are glass, tin, and fiber board. Glass jars have proved convenient for most housewives since they are already on hand. Two kinds of tin cans are being used. One the ordinary can which is sealed, and the other a can with a friction top which may be used several years if care is taken in storing it. Fiber board is satisfactory but expensive. This has not been used very much.

1 Preservation of Farm Products by Freezing, by Rae Russell and Con Maddox, Extension Service Bulletin 230 (rev.) May 1937, State College of Agriculture, Pullman, Wash. 8 pages, illustrated.

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The bulletin/¹ recommends that for certain products containers be sealed airtight. Others do not require an airtight seal. If an airtight seal is recommended, as for apricots or peaches, glass jars should be sealed with a rubber, otherwise just closing with the lid is all that is necessary.

Many women have found that cellophane caps have been satisfactory. We think people should be cautioned that ice-cream cartons are porous and therefore are not recommended. One firm in Portland is working on a parchment container similar in size and shape to a carton for a pound of butter. If this proves satisfactory, it will be inexpensive and convenient and will make good use of storage space. Packages should be separated in the lockers or the sharp freezing room until frozen and then stacked to save space.

We have found that although methods are clearly outlined in the bulletin, it is desirable to repeat certain precautions to women who are using this practice for the first time. We have found in a few instances that women have put the brine or sirup on hot. It should be emphasized that both product and brine or sirup must be cold.

It is important that products be stored fresh and in prime condition. Any delay will cause deterioration. We are suggesting that lockers run at zero, and Mr. Diehl assures us that this is especially important in the case of vegetables. Lockers may run as high as 10 degrees, but a lower temperature will insure a more satisfactory product.

Most operators do not permit the storage of fish because of the odor being transferred to other products. At the present time they are working on a method of glazing, and this may prove satisfactory, but we cannot give out this information yet.

The method we suggest for storing meat is the result of observation rather than of experimentation. In many instances the meat is cut by the butcher who operates the locker, or arrangements are made by the locker owner to provide this service. A charge of a cent or a cent and a half per pound is made for cutting the meat and wrapping it. We have been recommending wrapping in heavy parchment paper and then in heavy butcher paper. Some people have thought the second wrapping unnecessary, but until we have better information this a precaution worth taking.

There have been some reports of an unsatisfactory product when pork is stored. Rancidity seems to develop if pork is left in storage any length of time. We are suggesting that people store pork at the last of the killing season instead of early in the fall, and leave it for a limited time only. Beef seems to keep for an indefinite period of time and yields a very satisfactory product. It is expected that the work being done by the United States Department of Agriculture Experimental Farm at Beltsville, Md./², will give us further information on the storage of pork.

¹2 Animal Husbandry Division of the Bureau of Animal Industry, National Agricultural Research Center, Beltsville, Md.

For the last year or so farmers have been storing meat smoked as well as cured. This permits a milder cure, similar to that of the commercial product. The hams and bacons are sometimes cut in two, if this seems the size that would best suit the needs of the family. After curing, the smoked meat will keep as well as the fresh product. Most people have found that cutting chicken is more satisfactory, and few people are now storing chicken whole.

This past year people have been trying storage in cellophane bags that can be obtained at the local store. Most people have found that it is satisfactory for chicken.

We have had some reports that sausage loses its flavor upon freezing, and some families have found that seasoning the sausage after removing it from the locker gives a more satisfactory product than seasoning it at the time of making. Sausage does not seem to keep as well as other meats. This may be due to poor handling of the product before storage and also to storing in too large a container. We have been storing in pound and pound-and-one-half jars and are trying this method at the present time. Just recently one group of women reported that they had found storage of sausage in glass jars yields a much nicer product than storing in paper.

The home freezing plant built as a fair exhibit was well received. We are repeating it again this year and are using it on the campus at the present time. A second one was built for Dr. Neige B. Todhunter for storage of frozen products for vitamin research.

Ten or twelve farmers have reported that they are planning to build home freezing units this year, and our home management specialist has worked with one woman on a basement plan for her home, in which a unit was included. The R. E. A. is going into several counties, and a number of families have been interested in information as to cost and other details. When farms are located 15 or 20 miles from town, families are especially interested in planning for their own units.

R. N. Miller, extension economist, and H. J. Dana of the Engineering Experiment Station, have written a bulletin on home freezing units which is being printed at the present time.

Editor's note: Helpful publications on the freezing of meat are:

Cold Storage Lockers, by Morris, Warrington, and Eggert,
Agricultural Extension Division, University of Minnesota.
15 pages, illustrated.

Thawing and Cooking Frozen Meats, by Alice M. Child, Division
of Home Economics, University of Minnesota. 6 pages.

A Preliminary Study of the Use of Frozen Meats. (A joint
study by the Departments of Home Economics and Animal

Husbandry, Extension Service in Agriculture and Home Economics, University of Illinois, Urbana.) 3 pages, mimeographed.

Cold-Storage Lockers for Preserving Farm-Dressed Meat, by K. F. Warner, Extension Meat Specialist, United States Department of Agriculture.

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